



Product Description

Motorola M800BP
CDMA Bag Phone



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1 Introduction

The **M800 Bag Phone** is a powerful carry-case solution to be used on the road, at the job or in the field for clients in a variety of industries such as Oil and Gas, Agriculture and Forestry.

An innovative and complete solution to *on-the-move* communication, the **M800 Bag Phone** eliminates the barriers of time and place to deliver fast, reliable and convenient access to voice and data communication *wherever you are, whenever you need it*.

Key Features Include:

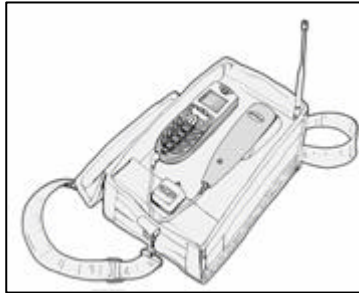
- Built-in hands-free CDMA phone, including private mode operation
- Optional booster available for extended range
- Easy to install in the vehicle environment – external microphone to install on sun visor (1.5m wire), CLA as a source for CD power supply and an optional magnetic antenna to mount on the vehicle roof
- Easy to install in the office environment - using fix-mounted microphone on the Bag Phone chassis, wall mount charger as a source for DC power supply and swivel spike antenna mounted on the bag phone chassis
- Contents includes the CDMA (M800) Mobile phone, speaker, microphone, private handset and battery (for backup), a bag with rigid chassis and an additional pouch for accessories
- LED indication to signal the charging and power status
- Data file transferring, FAX (with WinFax) is supported via MPT tool version 3.25B and above, SMS and Open Wave Browser is supported via keypad or MPT tool
- Regulatory approvals include the FCC and IC guidance



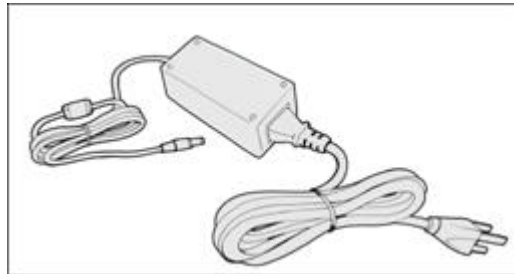
Figure 1: Product Illustration

2 Getting to know the Bag Phone

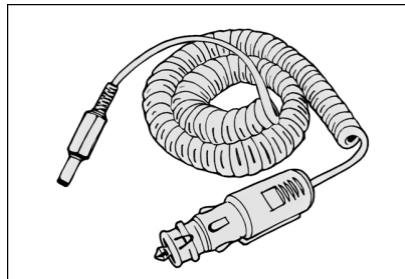
2.1 The Bag



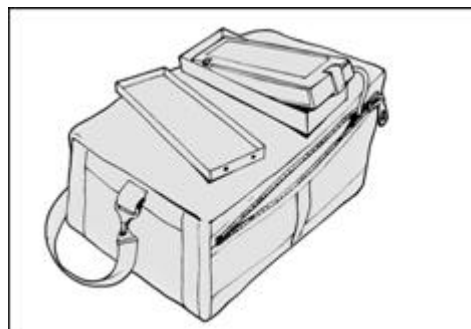
Power Supply Charger



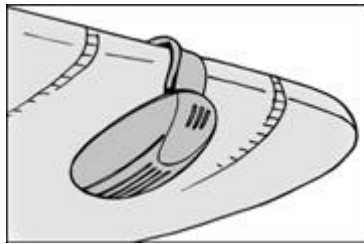
CLA



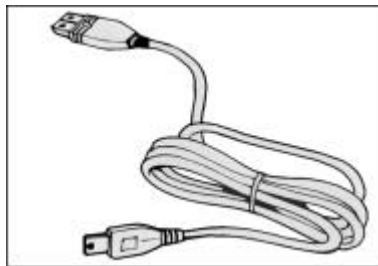
Battery Compartment



External Microphone



Mini USB Cable



Handset



Figure 2 Bag Phone Structure

The Bag chassis contains the following elements:

- Connector panel
- LED and Buzzer Indicator

Also attached to the bottom of the bag is the accessory pouch.

2.2 Connector Panel

The connector panel is used to connect various elements to the Phone Bag.

These elements are:

- External DC power source connector
- External Microphone connector
- USB cable connector

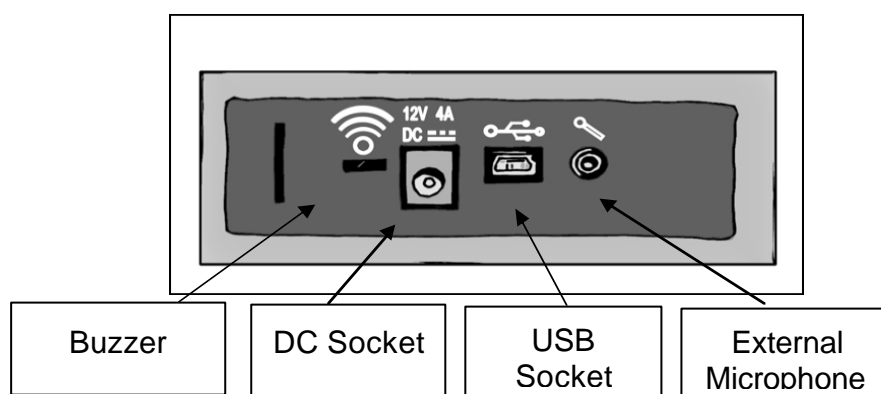


Figure 3: Connector Panel

2.3 LED and Buzzer Indicators

The LED and buzzer indicators are used to indicate the status of the battery, and the connection or disconnection of the external microphone or power supply.

LED status	Description
Steady Green	Working from CLA or AC power supply and not charging.
Blinking Orange and Green	Charging
Blinking Red	Low battery
Blinking Green	Supply voltage from back up battery

Table 1: LED status

Beep type	Description
High pitch beep	Low battery
Low +High pitch beep	External Microphone or DC supply connected
Low pitch beep	External Microphone or DC supply disconnected

Table 2: Buzzer Indication table

2.4 The Handset

The Motorola personal handset enables you to conduct private conversations and use the voice activation dialing features. Pressing the PTT button on the handset invokes the VAD name and number dialing features.

2.5 Antennas

The Bag Phone supports two types of antennas:

1. Swivel Spike antenna for office usage.
2. Magnetic antenna for vehicles usage – Optional not supplied.

Antenna Connector shell be TNC/M. Octopus cable will have TNC/F bulkhead.

The Antenna should be straightened before placing a call, or when unit is expecting a call.

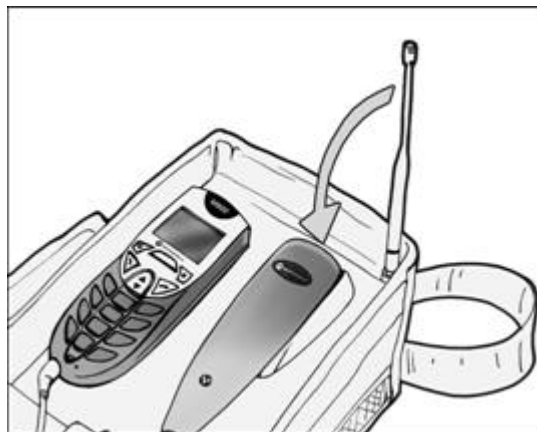


Figure 4: straightening the Swivel Antenna

2.6 External Microphone

The Bag Phone offers an external microphone for use in the car.

The microphone should be connected to the microphone socket located on the connector panel and slide the external microphone clip on the driver seat's visor. **See Figure 11**

2.7 DC Car Adaptor

The CLA power adaptor allows you to connect the M800 Bag Phone's to your car's lighter adaptor. The opposite side is to be connected to the DC socket in the Connector panel

This cable contains 4A fast blow Fuse. **See**

Figure 9

2.8 AC Wall adaptor

The wall socket power adaptor allows you to connect the M800 Bag Phone's to your wall socket adaptor. The opposite side is to be connected to the DC socket in the connector panel. The adaptor is capable to supply 12V D.C / 50W max to the bag D.C input.

See [Figure 10](#)

2.9 Backup Battery

The Motorola Bag Phone contains a Battery compartment for the backup battery.

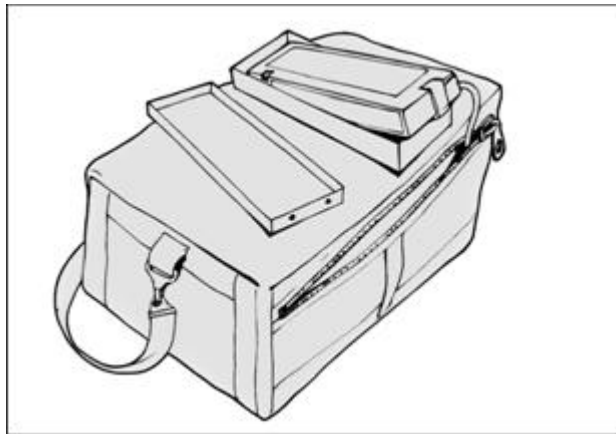


Figure 5: Battery Compartment

2.9.1 Battery type

The product is intended for use only with battery pack WP1223A by Kung Long Batteries Ind.

2.9.2 Caution

Risk of explosion if battery is replaced by an incorrect one. Dispose of used batteries according to the instructions.

3 External Accessories

3.1 RF Booster

The RF Booster is used to boost the unit's transmission.

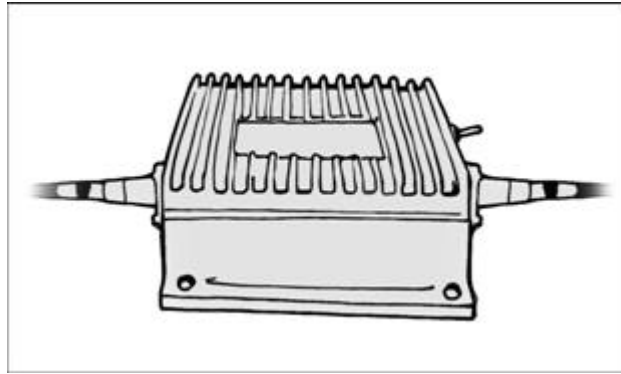


Figure 6: RF Booster

3.2 USB Cable

The USB cable is used to send and receive data and Fax calls to your portable computer.
See [Figure 12](#)

4 Product Main Features

The Bag Phone supports the following Features:

4.1 Bag Audio

Audio Performance:

- H/F audio is half duplex.
- Private call is Full duplex.

The audio processing includes echo canceller and noise suppression (M800 performance is kept).

4.1.1 Office environment:

Hands free call using internal MIC that is located at the front panel of the product and powerful loudspeaker.

4.1.2 Car environment:

Hand free call using External MIC mounted on the sun visor.

4.1.3 Private mode:

The user will conduct private calls via the handset.

When the handset is out of the cradle, the audio will be automatically routed to the handset and vice versa. Also, when the handset is out of the cradle, the push button will emulate the M800 VAD button

4.2 HMI

- Enhanced keypad with large fonts.
- Big display with up to 8mm character height.
- Attractive blue back light.
- Motorola Synergy menu structure.
- Voice recording up to 120 seconds.
- One key to operate major features – Voice activation, Recording, SEND / END.
- Contrast and backlight control.
- Language support: English and French Canadian.

4.3 Data

- Open wave browser.
- CSD Max 14,400 BPS.
- High-speed data 156KBPS.
- Support USB communication.

4.4 SMS

- MO/MT text.
- ITAP – Predictive text in English.

4.5 Supplementary Services

- Call waiting.
- Caller ID.
- Conference call.

4.6 Control and status indicators

- Wake up banner.
- Message waiting indicator.
- Voice mail message indicator.
- RSSI Indication.
- LED indication upon battery status and operating power mode.

4.7 Operation options

- Backup battery.
- CLA cable – in vehicles.
- Universal AC power supply – in the office.

4.8 Bag Phone tri-color Led and buzzer indication

This paragraph describes the bag tri-color led indicator and buzzer functionality

LED / Buzzer indication	Description	Remarks
Steady Green	Operating from CLA or AC power supply and no charging.	
Blinking Orange and Green	Battery Charging indication	Battery consume more than 10mA
Blinking Red	Low battery indication along with short beep every 3 min. at 2.5KHz during back up mode only	Battery voltage less than 11.4V
Blinking Green	Supply voltage from back up battery	Battery voltage > 11.4V
1KHz short beep followed by	External MIC or DC supply	

LED / Buzzer indication	Description	Remarks
2.5KHz short beep	plugged in.	
Short beep at 1KHz	External MIC or DC supply plugged out.	

Table 3 tri-color Led and Buzzer indication

5 Bag radio MMI



Figure 7 Bag Phone Radio MMI

6 Bag Phone Operation Modes

When the regular DC sources (AC PS or CLA) are not applied, automatically the product will switch to backup battery. The battery is located in a dedicated pouch of the main bag

6.1 Battery operation

Battery type: Lead ACID, 12V, and 2.3Ah.

Charging method: Float charging- Constant voltage (13.8V) with current limit of 250mA

Operating temp of the Charger: -5°C to +45°C.

Battery voltage less than 8V will be charged at 125mA till voltage will exceed 8V ($\pm 0.3V$).

Battery voltage less than 10.2V will be considered empty battery and the "power off" procedure will disconnect the battery.

Battery voltage	Working from battery	Working from external DC
$V_{\text{batt}} \leq 8 (\pm 0.3V)$	Disconnect battery	Slow charging
$8 < V_{\text{batt}} < 10.2 (\pm 0.5V)$	Disconnect battery	Normal charging
$10.2 < V_{\text{batt}} < 11.4 (\pm 0.3V)$	Low battery	Normal charging
$V_{\text{batt}} \geq 11.4 (\pm 0.3V)$	Normal Battery voltage	Normal charging. When the charging current reduces to 10mA the Green light will apply

Table 4 Charging Method Vs. Battery Voltages

7 Key Pad Description

Each key contains large English alphanumeric fonts.

The color of the keyboard is black with white fonts.

Illuminated blue keypad backlight

Keys description:

- Left Soft Key – Performs functions identified by left display prompt.
- Right Soft Key – Performs functions identified by right display prompt.
- Menu Key – Enter to [Phone User interface](#).
- SEND Key – Sends and answers calls, view recent dialed calls list.
- END Key – Ends phone calls, exits menu system.
- Scroll Key – Moves through menus and lists. Scroll UP activated micro browser

- Power Key – Unit ON/OFF.
- Volume Keys – Adjusts audio volume and ringer volume.
- Number Keys – 10 keys.
- VAD Key – Activates voice activation dialing and implement SEND / END functionality
- [#] Key.
- [*] Key. the

8 Phone User interface

Main Menu

Phonebook

Recent calls

- Received Calls
- Dialed Calls
- Notepad
- Call times

Messages

- Voicemail
- New message
- Inbox
- Outbox
- Quick Notes
- Drafts
- Browser Alerts

Browser

Settings

- Ring Styles
- Phone Status
- Browser Setup
- Connection
- In-call Setup
- Security
- Voice Activation
- Other Settings

Icon Viewer

Shortcuts

Calculator

Date book

Voice Notes

9 Bag Phone Product Models

The Bag Phone Kit number is F289603NAAA

9.1 Bag Phone Model main contents

#	Description	Motorola P/N
1.	AC Power Supply 12V 50W	FPN5629A
2.	Battery 12V/2.3AH	FNN7825A
3.	External Microphone	FTN6946A
4.	Swivel spike Antenna – 0dBI gain	FAF5225A
5.	Chassis Assembly	FHN6737A
6.	Packaging	FBN7126A
7.	M800 Unit Assembly	FLN3500A
8.	Handset	FTN6494B
9.	CLA Cable – D.C	3086159U65
10.	Quick User Manual –English	6889192V23
11.	User Manual – English	6889192V24

Table 5: Bag Phone Model main contents

9.2 Optional Accessories

#	Description	Motorola P/N
1.	Data Kit – Contains – MPT application and Mini USB data cable	FTN6942A
2.	Cyfre Booster Adapter kit	FTN6912A
3.	Arista Booster Adapter kit	FTN6913A
4.	Wilson Booster Adapter kit	FTN6914A

Table 6: Optional Accessory

10 Optional Accessories

10.1 Booster

The voltage supply to the booster will be through the charging and indication box.

The voltage supply will apply to the booster only when the M800 is ON.

The Booster will be mounted in a special cage. This cage is attached to the main bag chassis.

The Bag Phone enables mounting one of the following three RF boosters:

Wilson (model 811101A)

Cyfre (Model CA-819).

Signalreach (Model SA210)

10.1.1 Adaptors for Wilson Booster:

Coax cable TNC/male connector to FME/female connector

Coax cable FME/female connector to on panel TNC/female connector

DC Adaptor (3A Fast blow fuse).

10.1.2 Adaptors for Cyfre and Signalreach Boosters:

Coax cable TNC/male connector to FME/female connector.

Coax cable FME/female to on panel TNC/female connector.

10.2 Data Kit

Data/MPT application:

- Support FAX via WinFax and MPT Application.
- SMS Sending & receiving.
- Open Wave browser: Data/Open wave browser.
- Language support: English, French Canadian.

11 Bag Phone Specifications

Electrical Specifications	
Operating Voltage allowed from external AC wall adaptor connector	9-16V
Current consumption in off mode	Battery above shut down voltage (10.4V):2.5mA Max Battery below shut down voltage (10.4V):0.5mA Max
Current consumption in idle mode – DC source: Battery	No booster: Less then 0.25A With Cyfre booster: Less then 0.45A With Wilson booster: Less then 0.6A
Current consumption in idle mode – DC source: AC Wall Adaptor / DC Car Adapter	No booster: Less then 0.5A With Cyfre booster: Less then 0.7A With Wilson booster: Less then 0.85A
Current consumption in call mode – DC source: Battery	No booster hands free call: Less then 0.95A No booster private call: Less then 0.45A With Cyfre booster hands free call: Less then 1.65A With Cyfre booster private call: Less then 1.15A With Wilson booster hands free call: Less then 2.35A With Wilson booster private call: Less then 1.85A
Current consumption in call mode – DC source: AC Wall Adaptor / DC Car Adapter	No booster hands free call: Less then 1.2A No booster private call: Less then 0.7A With Cyfre booster hands free call: Less then 1.9A With Cyfre booster private call: Less then 1.4A With Wilson booster hands free call: Less then 2.6A With Wilson booster private call: Less then 2.1A
Radio Performance	
CDMA1X/AMPS	800/1900 MHz
Air Interface	CDMA2000 / IS95B

TX out power without booster	CDMA1X 800/1900 < 24 dBm; 0.25W Peak AMPS 800 < 26 dBm
RX Sensitivity	< -104 dBm
Antenna Gain	0dBi
DATA	CSD: 14,400BPS 1XDATA: 156KBPS
Air Interface Standards	
CDMA2000 R. 0 – P REV 6	
IS-95B Phase I	
IS-95B Phase II	
IS-96A: 8 Kbps variable rate vocoder specification	
CDG-27: 13Kbps variable rate vocoder specification	
TSB-74: Physical layer for 13K vocoder	
IS-127: EVRC (8Kbps) variable rate vocoder specification	
IS-98D: Minimum mobile performance standard Phase I and Phase II	
IS-637A: Short Message Service	
IS-683A: Over The Air Activation	
IS-801: Position Determination Service.	
Serial Interfaces	
USB	Standard Type A (Via Optional Cable)
Physical Specifications	
Dimensions - Bag	340±10m"m Length X 220±10m"m Wide X 110±10m"m Height
Dimensions- Accessory Pouch	340±10m"m Length X 210±10m"m Wide X 80±10m"m Height
Weight – No Booster	2.9Kg +1Kg Accessories Pouch
Weight – Wilson Booster	3.6Kg +1Kg Accessories Pouch
Weight – Cyfre Booster	3.6Kg +1Kg Accessories Pouch
Weight – Arrista Booster	4.4Kg +1Kg Accessories Pouch

Bag Color	Bright Black
Bag Material	Ballistic Nylon
Battery Operation time for full charged battery @ 25°C	
Battery Operation time during call No Booster	Hands free: 105 minutes Private call: 240 minutes
Battery Operation time during call Wilson Booster	Hands free: 35 minutes Private call: 60 minutes
Battery Operation time during call Cyfre Booster	Hands free: 20 minutes Private call: 35 minutes
Environmental Specifications	
Operating temperature	-20°C +50°C When using Booster or operating from battery
Operating temperature	-20°C +60°C When operating from external DC, without booster
Charging Temperature	-0°C +40°C In any mode of operation
ESD	EN61000-4-2
Environment performance standards for land mobile products	Motorola 12M05049A04
Product Flammability	Motorola 00M05029B01
Approvals Compliance & Safety Standards	
FCC ID	IHDT56CW1
CDG	Motorola, Nortel, Lucent (C18 OEM Level)
IC (Industry Canada)	109O-CW1
IC standard:	Declare Upon RF Max Power. Receive approval based on M800
EMC standard	Declare Upon RF Max Power. Receive approval based on M800
Safety standard	EN60950-1

Table 7: M800 Bag Phone Specifications

12 Package Content

12.1 Bag Phone package

The Bag Phone package is made of carton.

Package dimensions: 350±10mm Length X 230±10mm Wide X 210±10 mm Height

Bag Phone package weight: 3.93Kg.

Packing contains:

- Bag Phone and battery
- Accessories Pouch with: AC Wall Adaptor, DC Car Adaptor (CLA), MPT data kit, external MIC.
- User's manual and quick user manual is in English and Canadian French.

12.2 Booster Chassis Package

Booster chassis package is made of carton.

Booster chassis package internal dimensions: 340±10mm Length X 180±10mm Wide X 70±10 mm Height.

Booster chassis package weight: 0.7Kg.

13 Product Labeling

13.1 Product Labeling

13.1.1 On the back of the M800

- FCC and IC ID number : 1HDT56CW1 and 1090 - CW1
- Motorola Marking
- Model number F3204A
- Serial number + Barcode
- ESN number (Decimal) + bar-coded in Bar-coded 39
- Production date: MM/YYYY
- Hardware/Software revision code

13.1.2 On the Main bag chassis

- FCC and IC ID number : 1HDT56CW1 and 1090 - CW1
- Motorola Marking
- SKU=M800BP
- Model number : F289603NAAA
- Serial number + Barcode
- ESN number (Decimal) + bar-coded in Bar-code 39 (Same as for M800)
- Hardware/Software revision codes

- Production date: MM/YYYY
- CE marking

14 Consolidation Package

14.1 Bag Phone Consolidation Package

Three Bag Phone cartons are placed in one consolidation package.

Consolidation package dimensions: 715±10m"m Length X 235±10m"m Wide X 380±10m"m Height.

Consolidation package weight: 12.8Kg.

14.2 Consolidation Package labeling

Each consolidation package labeled with the following details:

Model number + barcode

List of S/N and ESN's (bar-coded)

Serial number + Barcode

14.3 Booster chassis Consolidation Package

Ten booster chassis packages are placed in one consolidation package.

Consolidation package dimensions: 375±10m"m Length X 355±10m"m Wide X 390±10m"m Height.

Consolidation package weight: 7.8Kg.

15 Appendix A

15.1 Product label



Figure 8: Bag Phone unit label Example

15.2 CLA Cable

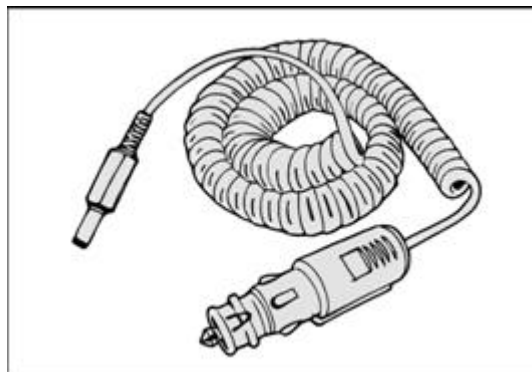


Figure 9: DC Car Adaptor (CLA)

15.3 AC Wall Adaptor

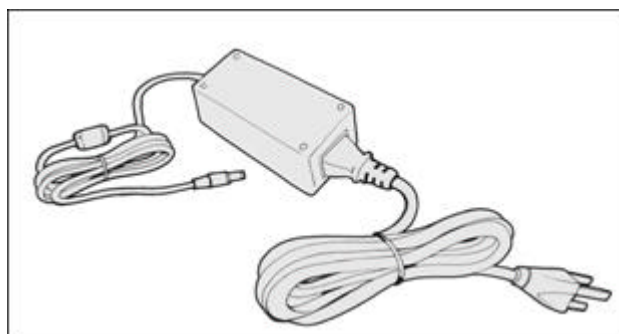


Figure 10: AC Wall Adaptor

15.4 External Microphone

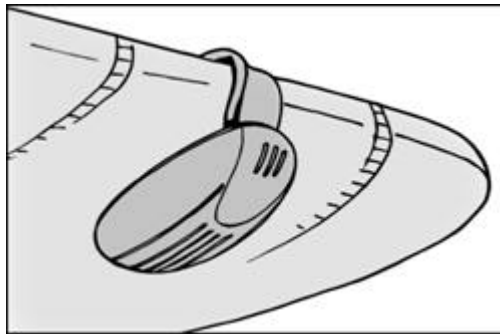


Figure 11: External Microphone

15.5 Mini-USB to USB type A data cable

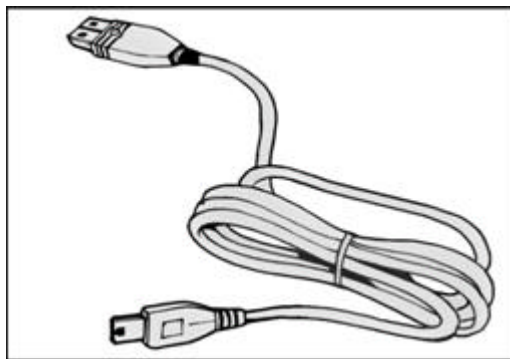


Figure 12: Mini-USB to USB type A data cable

15.6 Battery

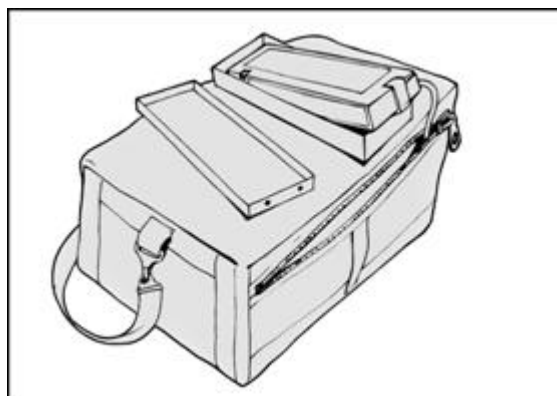


Figure 13: Battery